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$$R_1 = \begin{bmatrix} \begin{bmatrix} R_3 \end{bmatrix}_{2-m} \\ P = \begin{bmatrix} Hal \end{bmatrix}_m \end{bmatrix}_n$$
(IIb),

$$R_{1} = \begin{bmatrix} \begin{bmatrix} R_{3} \\ P \end{bmatrix} & 2-m \\ P = \begin{bmatrix} -Hai \end{bmatrix}_{m} \end{bmatrix}_{n}$$
(Iia)

$$R_{1} = \begin{bmatrix} \begin{bmatrix} R_{3} \end{bmatrix}_{2-m} \\ P = \begin{bmatrix} Hal \end{bmatrix}_{m} \end{bmatrix}_{n}$$
(lic

formula Ila or a phosphorous halide oxide of formula (IIb) or a phosphorous halide sulfide of formula (IIc) with an alkali metal in a solvent in the presence of a proton source; (2) subsequent reaction with m acid halides of formula (III) An oxidation step may follow to obtain mono- and bisacylphosphane oxides or mono-and bisacylphosphane sulfides.

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MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SB, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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